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MOTOROLA, INC. 1303 EAST ALGONQUIN ROAD IL01/3RD SCHAUMBURG, IL 60196			EXAMINER DEAN, RAYMOND S	
			ART UNIT 2618	PAPER NUMBER
			NOTIFICATION DATE 07/10/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Docketing.Schaumburg@motorola.com  
APT099@motorola.com

**Office Action Summary**

Application No.

10/654,227

Applicant(s)

SARTORI ET AL.

Examiner

Raymond S. Dean

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14, 17-25, 28 - 48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20-22 and 48 is/are allowed.
- 6) ☒ Claim(s) 1-14, 17-19, 23, 25 and 28-47 is/are rejected.
- 7) ☒ Claim(s) 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. The declaration filed on April 30, 2007 under 37 CFR 1.131 is sufficient to overcome the Periyalwar reference.

### ***Response to Arguments***

2. Applicant's arguments, see remarks filed April 30, 2007 with respect to the rejection(s) of claim(s) 1 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art Baker et al. (US 2003/0220075), Tamaki et al. (US 7,139,527), Trompower (6,132,306).

Baker teaches a method comprising: at a base site: determining a need to receive a wireless transmission from a transmitter that is presently within wireless communications range of the base site (Section 0014 lines 25 – 28, CDMA systems use a random access control method in which accesses the base station via a random access channel (RACH), the base station will read the RACH channel to determine if a mobile station within in range of said base station wants to communicate with said base station); automatically determining whether to selectively allocate a wireless relay resource intermediate between the base site and the transmitter to thereby at least attempt to increase a quality of service to support the wireless transmission from the transmitter (Section 0018), wherein the wireless relay resource comprises a

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demodulation processing relay resource (Section 0045); providing an instruction to the wireless relay resource to cause the wireless relay resource to relay at least portions of the wireless transmission from the transmitter (Section 0018); wherein knowledge of the wireless relay resource allocation is unnecessary for the transmitter (Figure 2A, Section 0040 lines 1 – 9, the transmissions from the remote stations will be received by the repeater without said remote stations having knowledge of the repeater).

Baker does not teach providing a grant instruction to the transmitter and the wireless relay resource comprising channel identification information and transmit parameters that are used by the transmitter to transmit and by the wireless relay resource to receive and wherein the instruction comprises providing at least identifying information regarding the transmitter.

Trompower teaches a grant instruction to the transmitter and the wireless relay resource comprising channel identification information and transmit parameters that are used by the transmitter to transmit and by the wireless relay resource to receive (Cols. 41 lines 30 – 37, lines 64 – 67, the mobiles and repeaters can receive instructions to change channel parameters).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the repeater system of Baker with the above dynamic functionality of Trompower for the purpose of compensating for the change in noise conditions in the radio environment as taught by Trompower.

Tamaki teaches wherein the instruction comprises providing at least identifying information regarding the transmitter (Figure 7B, Col. 8 lines 51 – 55).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the above identification method of Tamaki in the repeater system of Baker in view of Trompower for the purpose of specifying which mobile station's transmission will be repeated or relayed as taught by Tamaki.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 34 – 35 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. There appears to be a step missing between the determining step of line 22 and the re-encoding step of line 23 of Claim 34. It is not clear happens if the transmission is incorrectly received. One would assume that that the information would not be re-encoded if the transmission is incorrectly received but it is not clear in the claim what happens if the transmission is incorrectly received. Claim 35 depends on Claim 34 therefore examiner gives same reason as set forth above.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 – 10, 12 – 14, 17 – 19, 23, 25, 28 – 31, 36 – 39, 41 – 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baker et al. (US 2003/0220075) in view of Trompower (6,132,306) and further in view of Tamaki et al. (US 7,139,527).

Regarding Claim 1, Baker teaches a method comprising: at a base site (Section 0041 lines 12 – 14): determining a need to receive a wireless transmission from a transmitter that is presently within wireless communications range of the base site (Section 0014 lines 25 – 28, CDMA systems use a random access control method in which accesses the base station via a random access channel (RACH), the base station will read the RACH channel to determine if a mobile station within in range of said base station wants to communicate with said base station); automatically determining whether to selectively allocate a wireless relay resource intermediate between the base site and the transmitter to thereby at least attempt to increase a quality of service to support the wireless transmission from the transmitter (Section 0018), wherein the wireless relay resource comprises a demodulation processing relay resource (Section 0045); providing an instruction to the wireless relay resource to cause the wireless relay resource to relay at least portions of the wireless transmission from the transmitter (Section 0018); wherein knowledge of the wireless relay resource allocation is unnecessary for the transmitter (Figure 2A, Section 0040 lines 1 – 9, the transmissions from the remote stations will be received by the repeater without said remote stations having knowledge of the repeater).

Baker does not teach providing a grant instruction to the transmitter and the wireless relay resource comprising channel identification information and transmit

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parameters that are used by the transmitter to transmit and by the wireless relay resource to receive and wherein the instruction comprises providing at least identifying information regarding the transmitter.

Trompower teaches a grant instruction to the transmitter and the wireless relay resource comprising channel identification information and transmit parameters that are used by the transmitter to transmit and by the wireless relay resource to receive (Cols. 41 lines 30 – 37, lines 64 – 67, the mobiles and repeaters can receive instructions to change channel parameters).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the repeater system of Baker with the above dynamic functionality of Trompower for the purpose of compensating for the change in noise conditions in the radio environment as taught by Trompower.

Tamaki teaches wherein the instruction comprises providing at least identifying information regarding the transmitter (Figure 7B, Col. 8 lines 51 – 55).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the above identification method of Tamaki in the repeater system of Baker in view of Trompower for the purpose of specifying which mobile station's transmission will be repeated or relayed as taught by Tamaki.

Regarding Claim 2, Baker in view of Trompower and in further view of Tamaki teaches all of the claimed limitations recited in Claim 1. Baker further teaches receiving a wireless message from the transmitter that includes an indication of a need to transmit the wireless message to the base site (Section 0014 lines 25 – 28, CDMA systems use

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a random access control method in which accesses the base station via a random access channel (RACH), the base station will read the RACH channel to determine if a mobile station within in range of said base station wants to communicate with said base station).

Regarding Claim 3, Baker in view of Trompower and in further view of Tamaki teaches all of the claimed limitations recited in Claim 1. Baker further teaches receiving the wireless message, at least in part, via a control channel (Section 0014 lines 25 – 28, CDMA systems comprise control channels).

Regarding Claim 4, Baker in view of Trompower and in further view of Tamaki teaches all of the claimed limitations recited in Claim 1. Baker further teaches determining that a present wireless communication path between the transmitter and the base site will not likely support a desired effective data rate (Sections 0014 lines 25 – 28, 0015, EV-DO systems comprise the use of data rates, the location of the mobile station affects the data rate thus the mobile will need to be in particular locations in order for a particular data rate to be achieved).

Regarding Claim 5, Baker in view of Trompower and in further view of Tamaki teaches all of the claimed limitations recited in Claim 4. Baker further teaches using information regarding link channel quality for at least one transmission from the base site to the transmitter (Section 0017, path loss is a link channel quality).

Regarding Claim 6, Baker in view of Trompower and in further view of Tamaki teaches all of the claimed limitations recited in Claim 1. Baker further teaches



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automatically determining whether to allocate a plurality of wireless relay resources to thereby at least attempt to increase the quality of service (Section 0018).

Regarding Claim 7, Baker in view of Trompower and in further view of Tamaki teaches all of the claimed limitations recited in Claim 6. Baker further teaches allocating selected ones of the pluralities of wireless relay resources to at least attempt to increase the quality of service (Sections 0018, 0040 lines 22 – 24).

Regarding Claim 8, Baker in view of Trompower and in further view of Tamaki teaches all of the claimed limitations recited in Claim 7. Baker further teaches allocating some but not all presently available wireless relay resources (Sections 0018, 0040 lines 22 – 24).

Regarding Claim 9, Baker in view of Trompower and in further view of Tamaki teaches all of the claimed limitations recited in Claim 1. Baker further teaches automatically determining whether to allocate a wireless relay resource that utilizes at least one carrier resource that is otherwise also shared by a communication system that includes the base site to effect direct communications between the base site and member communication units (Section 0014 lines 25 – 28, the PN codes in a CDMA system are carrier resources that effects direct communications between the base station and the mobile station, said PN codes are also used by the repeater).

Regarding Claim 10, Baker in view of Trompower and in further view of Tamaki teaches all of the claimed limitations recited in Claim 1. Baker further teaches automatically determining whether to allocate a wireless relay resource that utilizes at least one carrier resource that is not otherwise also shared by a communication system

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that includes the base site to effect direct communications between the base site and member communication units (Section 0019, the carrier resource is the translated frequency of the wireless link between the base station and repeater, the direct link between the base station and the mobile station can be a different frequency than said link between said repeater and said base station).

Regarding Claim 12, Baker in view of Trompower and in further view of Tamaki teaches all of the claimed limitations recited in Claim 1. Baker further teaches providing the instruction via a control channel (Section 0014 lines 25 – 28, CDMA systems comprise control channels).

Regarding Claim 13, Baker in view of Trompower and in further view of Tamaki teaches all of the claimed limitations recited in Claim 12. Baker further teaches providing the instruction via a control channel that is also used to exchange at least some control information between the base site and the transmitter (Section 0014 lines 25 – 28, W-CDMA comprises control channels such as BCCHs, which is used by the base station to exchange control information with the mobile).

Regarding Claim 14, Baker in view of Trompower and in further view of Tamaki teaches all of the claimed limitations recited in Claim 1. Trompower further teaches providing at least one of: - a particular transmission parameter to expect when receiving the transmission from the transmitter; - a particular transmission parameter to use when relaying the transmission; - identifying information regarding a particular channel to monitor to receive the transmission from the transmitter; - identifying information regarding a particular channel to utilize when relaying the transmission to

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the base site (Cols. 41 lines 30 – 37, lines 64 – 67, the repeater will use a particular kind of modulation, which is a transmission parameter).

Regarding Claim 17, Baker in view of Trompower and in further view of Tamaki teaches all of the claimed limitations recited in Claim 1. Baker further teaches using relayed transmissions from a plurality of relay resources to receive the transmission from the transmitter (0040 lines 22 – 24).

Regarding Claim 18, Baker in view of Trompower and in further view of Tamaki teaches all of the claimed limitations recited in Claim 17. Baker further teaches receiving, on a same time-frequency channel, portions of the relayed transmissions from several of the plurality of relay resources to reconstruct the transmission (0040 lines 22 – 24).

Regarding Claim 19, Baker in view of Trompower and in further view of Tamaki teaches all of the claimed limitations recited in Claim 18. Durrant further teaches decoding received portions of the relayed transmissions from several of the plurality of relay resources to reconstruct the transmission (0014 lines 25 – 28, 0040 lines 22 – 24, the information that is relayed modulate an RF carrier, the base station will demodulate and decode the signal and combine the packets that comprise the transmitted information for reconstruction of said information).

Regarding Claim 23, Baker in view of Trompower and in further view of Tamaki teaches all of the claimed limitations recited in Claim 1. Baker further teaches combining received portions of relayed transmissions from the wireless relay resource with portions of transmissions from the transmitter to reconstruct the transmission (0014

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lines 25 – 28, in EV-DO systems information that is transmitted by the mobile station to the base station is broken down into packets of data, in order for said information transmitted by said mobile station to be reconstructed the packets of data that comprise said information will be combined).

Regarding Claim 25, Baker in view of Trompower and in further view of Tamaki teaches all of the claimed limitations recited in Claim 23. Baker further teaches combining received portions of relayed transmissions from at least one wireless relay resource with previously stored portions of transmissions from the transmitter to reconstruct the transmission (0014 lines 25 – 28, in EV-DO systems the information that is transmitted by the mobile station to the base station is broken down into packets of data, in order for said information transmitted by said mobile station to be reconstructed the packets of data that comprise said information will be stored until all packets are received and then combined).

Regarding Claim 28, Baker in view of Trompower and in further view of Tamaki teaches all of the claimed limitations recited in Claim 1. Baker further teaches a demodulation and decoding processing relay resource (Section 0045).

Regarding Claim 29, Baker in view of Trompower and in further view of Tamaki teaches all of the claimed limitations recited in Claim 1. Baker further teaches negotiating a data rate for the transmitter to utilize when transmitting the transmission (0014 lines 25 – 28, in HDR systems the data rates are negotiated).

Regarding Claim 30, Baker in view of Trompower and in further view of Tamaki teaches all of the claimed limitations recited in Claim 1. Baker further teaches

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determining a need to receive a wireless transmission comprising bearer data and not system control information that corresponds to resource allocation (0014 lines 25 – 28, in CDMA systems that are traffic channels on which the mobiles and base stations communicate, said traffic is bearer data).

Regarding Claim 31, Baker in view of Trompower and in further view of Tamaki teaches all of the claimed limitations recited in Claim 1. Baker further teaches allocating a communication resource to the relay resource (Section 0040 lines 1 – 9, the repeater relays the data packets to the base station thus said repeater will have a communication means).

Regarding Claim 36, Baker in view of Trompower and in further view of Tamaki teaches all of the claimed limitations recited in Claim 1. Baker further teaches automatically determining whether to allocate a wireless relay resource to thereby at least attempt to increase a quality of service to support a wireless transmission from the base site to the transmitter that is presently within communications range of the base site (Section 0018).

Regarding Claim 37, Baker in view of Trompower and in further view of Tamaki teaches all of the claimed limitations recited in Claim 36. Baker further teaches automatically determining whether to allocate a wireless relay resource to thereby at least attempt to increase a quality of service to support a wireless transmission from the base site to the transmitter that is presently within communications range of the base site but channel conditions for wireless transmissions from the base site to the transmitter are determined to be unacceptable due, at least in part, to channel

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characteristics (Sections 0015, 0018, the mobile can be in a location where the channel conditions are unacceptable).

Regarding Claim 38, Baker in view of Trompower and in further view of Tamaki teaches all of the claimed limitations recited in Claim 37. Baker further teaches delay spread characteristics (Sections 0015, 0018, the mobile can be in a location which causes multipath which causes delay spread).

Regarding Claim 39, Baker in view of Trompower and in further view of Tamaki teaches all of the claimed limitations recited in Claim 1. Baker further teaches allocating a wireless relay resource that couples via a wireless link to the base site (Figure 1, repeater (120), base site (104)).

Regarding Claim 41, Baker teaches a communications controller configured to operate at a base site (Section 0041 lines 12 – 14) comprising: - a wireless transmitter and receiver (Figure 1, the base station (104) comprises transceivers); - a resource allocator that is operably coupled to the wireless transmitter and receiver and that is responsive to a wirelessly transmitted signal from a remote unit that is within wireless reception range of the receiver requesting allocation of a communication resource to facilitate transmission of information to the receiver (Section 0014 lines 25 – 28, CDMA systems use a random access control method in which accesses the base station via a random access channel (RACH), the base station will read the RACH channel to determine if a mobile station within in range of said base station wants to communicate with said base station), a relay resource activator that is operably coupled to the resource allocator, such that a wireless relay resource intermediate between the base

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site and the remote unit and having a demodulation processing relay resource can be selectively activated by the communications controller to improve quality of service for a wireless transmission from the remote unit when transmitting within reception range of the receiver (Section 0018, 0045) and provides an instruction to the relay resource to cause the relay resource to relay at least portion of the wireless transmission from the remote unit (Section 0018), wherein the knowledge of the wireless relay resource allocation is unnecessary for the transmitter (Figure 2A, Section 0040 lines 1 – 9, the transmissions from the remote stations will be received by the repeater without said remote stations having knowledge of the repeater).

Baker does not teach, wherein the instruction comprises providing at least identifying information regarding the remote unit, and providing a grant instruction to the transmitter and the wireless relay resource comprising channel identification information and transmit parameters that are used by the transmitter to transmit and by the wireless relay resource to receive.

Trompower teaches a grant instruction to the transmitter and the wireless relay resource comprising channel identification information and transmit parameters that are used by the transmitter to transmit and by the wireless relay resource to receive (Cols. 41 lines 30 – 37, lines 64 – 67, the mobiles and repeaters can receive instructions to change channel parameters).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the repeater system of Baker with the above dynamic

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functionality of Trompower for the purpose of compensating for the change in noise conditions in the radio environment as taught by Trompower.

Tamaki teaches wherein the instruction comprises providing at least identifying information regarding the transmitter (Figure 7B, Col. 8 lines 51 – 55).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the above identification method of Tamaki in the repeater system of Baker in view of Trompower for the purpose of specifying which mobile station's transmission will be repeated or relayed as taught by Tamaki.

Regarding Claim 42, Baker in view of Trompower and in further view of Tamaki teaches all of the claimed limitations recited in Claim 41. Baker further teaches means for determining when to activate a relay resource to support a requested allocation of resources to facilitate the transmission of information to the receiver (Sections 0015, 0018).

Regarding Claim 43, Baker in view of Trompower and in further view of Tamaki teaches all of the claimed limitations recited in Claim 41. Trompower further teaches means for providing instructions to a given relay resource comprising at least one of - a particular data transmission rate to expect when receiving the transmission from the remote unit; - a particular data transmission rate to use when relaying the transmission to the receiver; - identifying information regarding a particular channel to monitor to receive the transmission from the remote unit; - identifying information regarding a particular channel to utilize when relaying the transmission to the receiver (Cols. 41 lines 30 – 37, lines 64 – 67, a particular channel is selected).



Regarding Claim 44, Baker in view of Trompower and in further view of Tamaki teaches all of the claimed limitations recited in Claim 41. Baker further teaches means for substantially simultaneously activating a plurality of relay resources to improve the quality of service for the wireless transmission from the remote unit (Sections 0018, 0040 lines 22 – 24).

Regarding Claim 45, Baker in view of Trompower and in further view of Tamaki teaches all of the claimed limitations recited in Claim 44. Baker further teaches reception means for receiving relayed transmissions from the plurality of relay resources and for reconstructing the wireless transmission from the remote unit by combining relayed transmissions from at least two of the plurality of relay resources (Sections 0014 lines 25 – 28, 0040 lines 22 – 24, in EV-DO systems the information that is transmitted by the mobile station to the base station is broken down into packets of data, in order for said information transmitted by said mobile station to be reconstructed the packets of data that comprise said information will be stored until all packets are received and then combined).

Regarding Claim 46, Baker in view of Trompower and in further view of Tamaki teaches all of the claimed limitations recited in Claim 1. Baker further teaches in response to providing the instructions to the transmitter and the wireless relay resource, operating by the transmitter independent of the functioning of the wireless relay resource, operating, by the transmitter, independent of the instructions provided to the wireless relay resource (Figure 2A, Section 0040 lines 1 – 9, the transmissions from the remote stations will be received by the repeater without said remote stations having

knowledge of the repeater, since the remote stations have no knowledge of the repeaters said remote stations will operate independent of said repeaters).

Regarding Claim 47, Baker in view of Trompower and in further view of Tamaki teaches all of the claimed limitations recited in Claim 1. Baker further teaches in response to providing the instructions to the transmitter and the wireless relay resource, conveying all control information to the transmitter independent of the allocated wireless relay resource (Figure 2A, Section 0040 lines 1 – 9, the transmissions from the remote stations will be received by the repeater without said remote stations having knowledge of the repeater, since the remote stations have no knowledge of the repeaters said remote stations will operate independent of said repeaters).

7. Claims 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baker et al. (US 2003/0220075) in view of Trompower (6,132,306) and further in view of Tamaki et al. (US 7,139,527), as applied to Claim 31 above, and further in view of Dinkins (5,633,876).

Regarding Claim 32, Baker in view of Trompower and in further view of Tamaki teaches all of the claimed limitations recited in Claim 31. Baker further teaches a temporal directive assigned to the transmitter to support the transmission from the transmitter (Section 0014 lines 25 – 28, in an EV-DO system the information that is transmitted by the mobile station comprises packets of data, said packets are transmitted one at a time thus there will be a temporary storage for the subsequent packets that need to be transmitted).

Baker in view of Trompower and in further view of Tamaki does not specifically teach providing a relayed transmission temporal directive that is subsequent to a temporal directive as is assigned to the transmitter to support the transmission from the transmitter.

Dinkins teaches a relayed transmission temporal directive (Figure 2, Column 3 lines 36 – 39).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the store and forward method in the repeater of Baker in view of Trompower and in further view of Tamaki for the purpose of reliably relaying said data packets as taught by Dinkins.

Regarding Claim 33, Baker in view of Trompower in view of Tamaki and in further view of Dinkins teaches all of the claimed limitations recited in Claim 32. Baker further teaches allocating a time slot to support the relayed transmission that is subsequent to a time slot as is assigned to the transmitter for the transmission (Section 0014 lines 25 – 28, GSM comprises time slots).

8. Claim 40 is rejected under 35 U.S.C 103(a) as being unpatentable over Baker et al. (US 2003/0220075) in view of Trompower (6,132,306) and further in view of Tamaki et al. (US 7,139,527), as applied to Claim 1 above, and further in view of Argyroudis (5,892,758).

Regarding Claim 40, Baker in view of Trompower in view of Tamaki teaches all of the claimed limitations recited in Claim 1. Baker in view of Trompower in view of

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Tamaki does not teach allocating a wireless relay resource that couples via a wireline link to the base site.

Argyroudis teaches allocating a wireless relay resource that couples via a wireline link to the base site (Column 8 lines 1 – 5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the wireline link taught by Argyroudis with the repeater of Baker in view of Trompower in view of Tamaki as an alternative means for forwarding a signal to said base station.

***Allowable Subject Matter***

9. Claim 24 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 20 – 22 and 48 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding Claim 24, The prior art of record fails to teach or show the combining received portions of relayed transmissions from at least one wireless relay resource with portions **redundant transmissions from the transmitter to reconstruct the transmission**. The prior art of record fails to teach or show this redundant feature, which is prevalent in HARQ and ARQ schemes, in the repeater or relay field of endeavor.

Regarding Claims 20, 48, The prior art of record fails to teach or show a **wireless relay resource configured to combine received portions of relayed transmissions from the transmitter using hybrid automatic repeat request (HARQ) to reconstruct the transmission**. Claims 21 – 22, which depend on Claim 20, are allowable for the same reasons set forth above.

### ***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond S. Dean whose telephone number is 571-272-7877. The examiner can normally be reached on Monday-Friday 6:00-2:30.

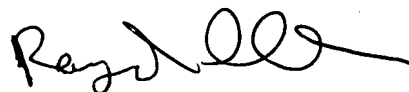
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban can be reached on 571-272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Raymond S. Dean

June 19, 2007



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